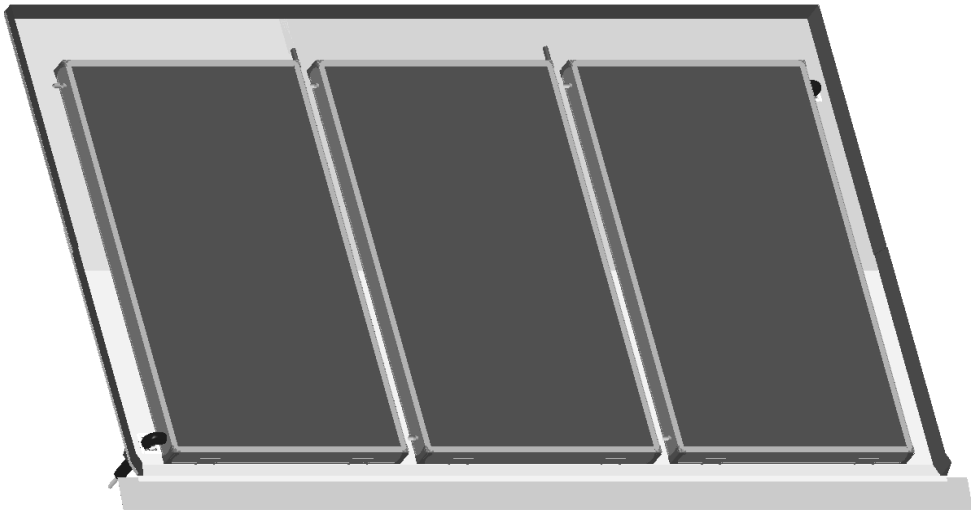
Dimplex
SOLAR



SOLC220 - Integrated Roof Kit

Installation Manual

0 Overall view

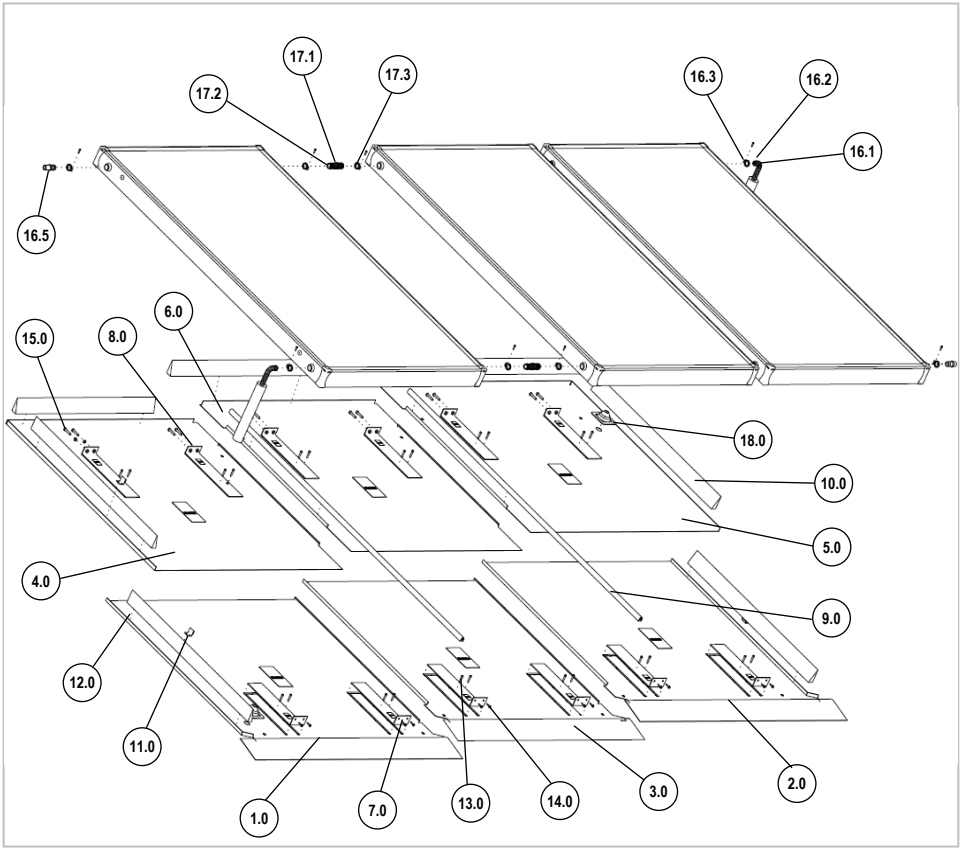


Figure 1 – Overall view of installation method

1.0 Bottom Left Hand Side Sheet
2.0 Bottom Right Hand Side Sheet
3.0 Bottom Middle Sheet
4.0 Top Left Hand Side Sheet
5.0 Top Right Hand Side Sheet
6.0 Top Middle Sheet
7.0 Bottom Bracket
8.0 Top Bracket
9.0 Rubber Seal
10.0 Foam Wedge (Tile Kit Only)
11.0 Securing Side Bracket
12.0 Tacking Nail
13.0 Fixing Kit 1 – Hex Head SD Screw
14.0 Fixing Kit 2 – Hex Head SD Screw
15.0 Fixing Kit 3 – M8 Nut & Bolt
16.1 Insulated Flexible Pipe
16.2 Insert Rings
16.3 Clamp With Screw
16.5 Brass Blanking Connection
17.1 Interconnection Fitting
17.2 Insert Rings
17.3 Clamp with Screw
18.0 Dektite Feed Through & Fixing Kit
19.0 Tile Support Bracket

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2 Before you start

General

Thank you for choosing a Dimplex product. We ensure you that every effort has been made at the design, manufacture and delivery stages to produce a product with superior quality. We will provide you with the best possible support throughout the product's lifespan.
As part of ongoing product development and improvement Dimplex reserves the right to undertake changes to the product without prior notice. Great care has been taken to ensure this manual was correct at the time of print. Should you however discover any issues with the information contained therein please do not hesitate to contact your vendor.
We strongly recommend reading the whole contents of this manual before commencing the work.

Competence

Dimplex products have been designed and manufactured to the current relevant standards and under stringent quality control. It is therefore imperative that the product is only installed by a:
- trained and
- competent

person as defined in the relevant regulations. Dimplex does not accept any liability for damage done to persons or property resulting from undue handling and usage of this product.
All regulations current at the time of installation are to be considered alongside the content of this manual as they form the code of best practice.

The warranty of this product is linked to the ability to prove that the product was installed, commissioned and maintained:
- by a competent person
- in accordance with Dimplex instructions and the current relevant regulations and legislation
- the product being registered with Dimplex at the time of installation using the form in the Dimplex On Site Guide
- records showing the date of maintenance in accordance with the maintenance schedule as detailed in the On Site Guide

Health and Safety

The installation of this product is subject to the Health and Safety at Work Act. It is your responsibility to ensure that the transport, storage, installation and operation of the product is carried out in a safe manner.
Dimplex will not accept any liability due to damage caused to people or property resulting from negligence or not adhering to the relevant Health and Safety practises.

Risk assessment

The compilation of a risk assessment is strongly recommended before installing the product. The following areas require particular consideration in addition to the information required by the Health and Safety at Work Act.

- scalding: where appropriate or required by law a thermostatic mixing valve is to be fitted to the hot water outlet of the cylinder
- explosion: the unit is fully equipped with all relevant safety equipment to comply with current regulations. The correct design and function has been verified by independent third party testing. The correct application thereof is the responsibility of the competent installer.
- water borne organisms (i.e. Legionella): if applicable a risk assessment should be carried out following the recommendations outlined in the Approved Code of Practise L8.
- the user preference must be considered when commissioning the system, in particular when adjusting the solar and auxiliary system temperature and timer settings.

Tools required

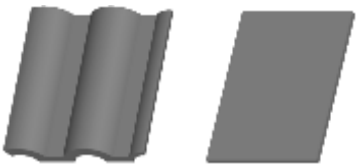
It is recommended that the below list of tools be used when installing the integrated roof kit.

- 2 people required for installation
- Measuring tape
- Hammer
- Drill
- 10mm hex head bit for drill
- M8 wrench
- Adjustable pliers
- Flat head screw driver
- 30mm hole saw/conical drill bit
- Angle grinder with stone disc

In addition to the above tools it may be required to wear suitable safety gloves upon installation as the kit consists of sheet metal which may cause cuts if care is not taken during handling of the product.

Reading this manual

Step: A.1 Tile



Most of the instruction points in this manual are generic, i.e. suit both tile and slate kits. These generic steps are denoted by number **A.0,** where A represents the numeric step.

Step: A.2 Slate

Steps denoted with **A.1** (always on LHS of page) represent the tiled kit instruction while **A.2** (always on RHS of page) represents the slate kit instruction.

Earthing and Lightening Protection

If a lightening arrester is available, the collector frame should be connected to it. This may be preformed using the collector frame, because the slot for mounting on the reverse side of the collector is ideally suited for fixing a thick cable. If no arrester is available, the potential equalization is carried out using a connection of a cable at the tube(s) which are led in the building. Please consult local regulations to ensure adherence.

Pipe Work

The pipe work from the collector to the pump unit and from the pump unit to the cylinder is to be all metal. The joints have to be high temperature resistant (compression or high temperature flat seal). For more information please see Technical Manual – Complete guide to Dimplex Solar, ST0133.

3 Scope of delivery

Please check the contents and the condition of your delivery before signing the delivery documentation against the content shown in Table 1 below and mark as appropriate. Contact your supplier immediately for any missing or damaged parts. Claims for missing of damaged parts after signing for the delivery documentation will not be accepted.

		SOL220RSI	SOL440RSI	SOL660RSI	SOL220RSIE	SOL220RTI	SOL440RTI	SOL660RTI	SOL220RTIE
1.2	BTM Sheet	1	-	-	-	1	-	-	-
2.2	Top Sheet	1	-	-	-	1	-	-	-
1.0	BTM LHS Sheet	-	1	1	-	-	1	1	-
2.0	BTM RHS Sheet	-	1	1	-	-	1	1	-
3.0	BTM Mid Sheet	-	-	1	1	-	-	1	1
4.0	Top LHS Sheet	-	1	1	-	-	1	1	-
5.0	Top RHS Sheet	-	1	1	-	-	1	1	-
6.0	Top Mid Sheet	-	-	1	1	-	-	1	1
7.0	BTM Bracket	2	4	6	2	2	4	6	2
8.0	Top Bracket	2	4	6	2	2	4	6	2
9.0	Rubber Seal	-	1	2	1	-	1	2	-
10.0	Foam Wedge	-	-	-	-	6	8	9	2
11.0	Side Bracket	-	-	-	-	4	4	4	4
12.0	Tacking Nail	1	1	1	-	1	1	1	-
13.2	Fixing Kit 1.2	1	-	-	1	1	-	-	1
13.4	Fixing Kit 1.4	-	1	-	-	-	1	-	-
13.6	Fixing Kit 1.6	-	-	1	-	-	-	1	-
14.2	Fixing Kit 2.2	1	-	-	1	1	-	-	1
14.4	Fixing Kit 2.4	-	1	-	-	-	1	-	-
14.6	Fixing Kit 2.6	-	-	1	-	-	-	1	-
15.2	Fixing Kit 3.2	1	-	-	1	1	-	-	1
15.4	Fixing Kit 3.4	-	1	-	-	-	1	-	-
15.6	Fixing Kit 3.6	-	-	1	-	-	-	1	-
16.0	Basic Connection Kit	1	1	1	-	1	1	1	-
16.1	Insulated Flexible Pipe	2	2	2	-	2	2	2	-
16.2	Insert rings	5	5	5	-	5	5	5	-
16.3	Clamp With Screw	4	4	4	-	4	4	4	-
16.4	Tube of Grease	1	1	1	-	1	1	1	-
16.5	Brass Blanking Connection	2	2	2	-	2	2	2	-
17.0	Extension Connection Kit	-	1	2	1	-	1	2	1
17.1	Interconnection Fitting	-	2	4	2	-	2	4	2
17.2	Insert rings	-	8	16	8	-	8	16	8
17.3	Clamp With Screw	-	4	8	4	-	4	8	4
18.0	Feedthrough Fitting & Fixing Kit	2	2	2	2	2	2	2	2
19.0	Tile Support Bbracket	-	-	-	-	1	2	3	1
20.0	Solar Collector Tempertaure Sensor	1	1	1	-	1	1	1	-

Table 1 – Contents of each integrated roof kit

4 Product features and descriptions

The Dimplex Integrated Roof kit offers a unique solution for mounting solar thermal collectors to the roof of a building. The concept of the product is to make installation of the collectors a quick and simple process.

The Integrated Roof Kit can cater for 2m² up to 20m² of collector area and comes in four variations, 2m² kit, 4m² kit, 6m² kit and 2m² extension kit. There are two further variations in these kits, i.e. one type for slate roofs and one type for tile type roofs.

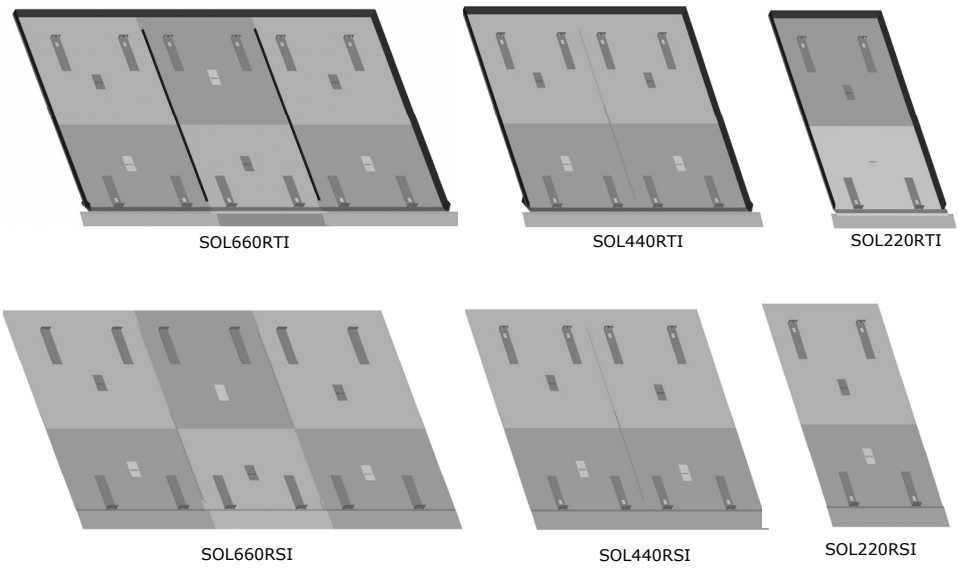


Figure 1 – Various Kits

The product consists of aluminium sheets that are secured to the laths of the roof. The collectors are secured to 'L' Shaped bracket using the correct fixing kits and the tiles/slates are placed around the kit, overlapping it to achieve a watertight seal with the roof. Some unique features of the product include:

- Large aluminium sheets that cover large area of roof rapidly
- Standard screws used to fix components to roof
- Collector can be installed after roof kit is fitted
- Low profile with the line of the roof is achieved
- For more than three collectors, extension kits are readily available
- Additional flashings are available if required

5 Collector connections

Because of its 4 connections, the collector offers a wide choice of connection options. Ensure that no part of the collector array or collector in the array is short circuited by following these instructions.

When planning the collector array, the position of the various connection parts must be in accordance with the diagrams, also pay attention to the position of the highlighted sensor pockets.

Table 3 illustrates the components required to make all the collector connection.

Part No	Image	Description
9.1		Inlet/outlet connection
9.2		Blanking connection
10.1		Collector interconnection

Table 3 - Collector connection components

5.1 Single collector vertical connection

When installing a single collector installation, there are two connection options available. Choice of connection option will be determined by suitability and location of the components in the solar system to one another, (pipe runs etc usually determine the choice).

Figure 2 illustrates the left hand side connection option and the right hand side connection options that are applicable only to a single vertical collector connection.

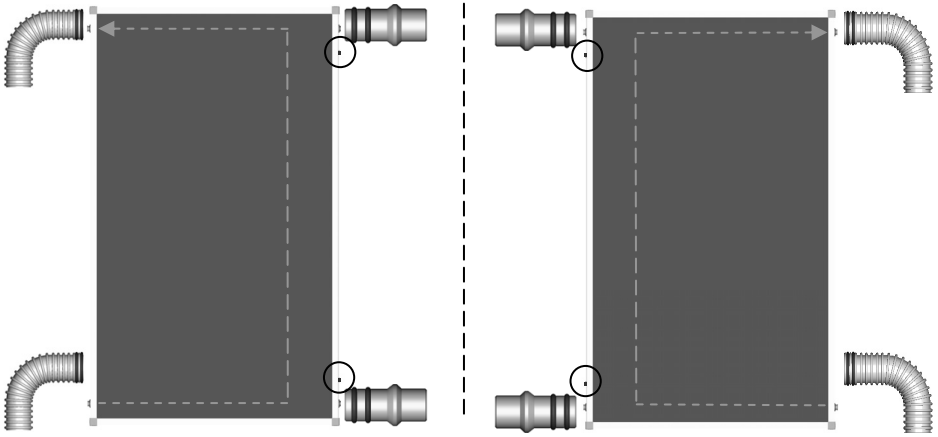


Figure 2 – Left hand side and right hand side connection options for single collector only

5.2 Multiple collector vertical connection

When installing multiple collectors, (2 up to 10), component 10.1 is used to connect one collector to the next. The flow and return connections must be at diagonals to one another as illustrated in Figure 3 and Figure 4. These diagrams highlight the two connection options available when connecting multiple collectors vertically in an array. When connecting up to five collectors in an array the flow and return connections can be made on the same side.

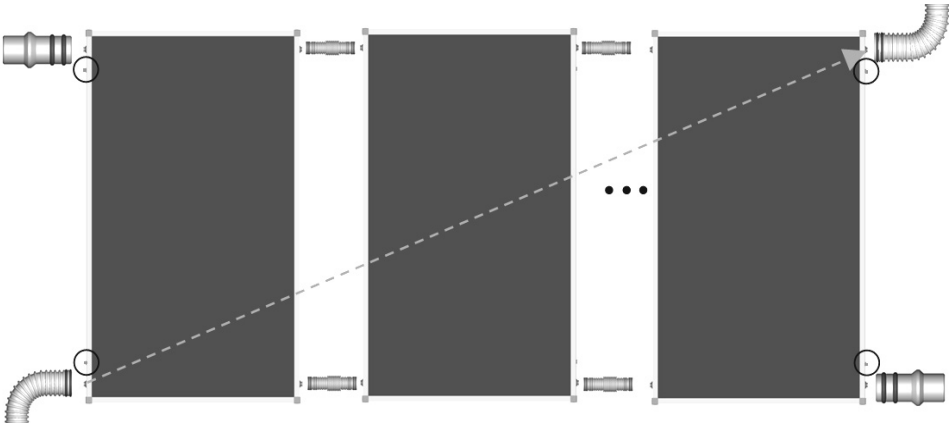


Figure 3 - Multiple collector vertical connection, Option 1

The location of the sensor pockets should be noted upon installation, which is highlighted in Figure 3 and Figure 4. The orientation of the middle collector(s) is unimportant. The collector temperature senor should be installed at the collector flow, (flow to the cylinder).

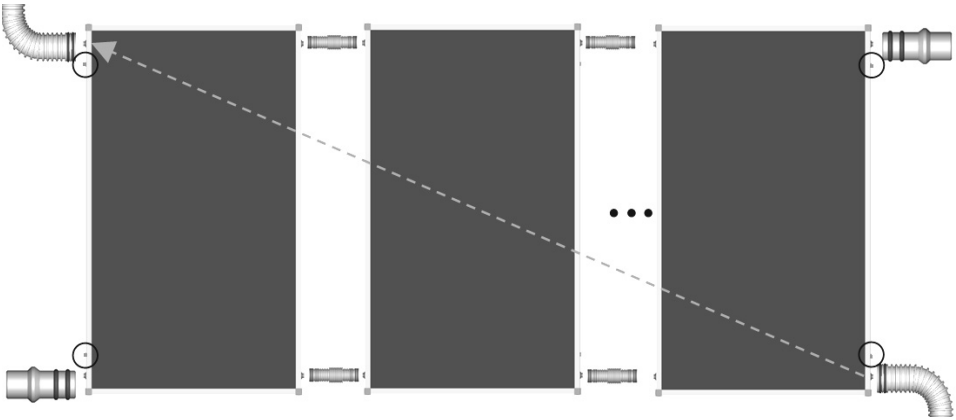


Figure 4 – Multiple collector vertical connection, Option 2

6 Installation

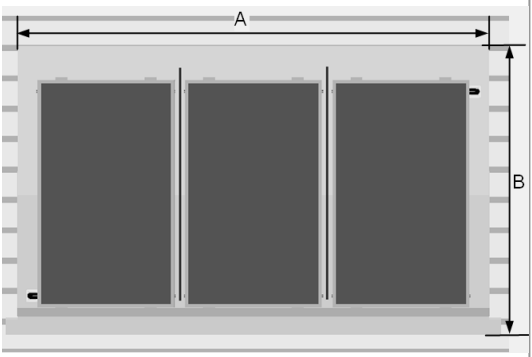
NB: Ensure all the laths under the area of the installation are in good condition. Replace any damaged, week or broken laths and double nail or screw to the rafters.

1.0

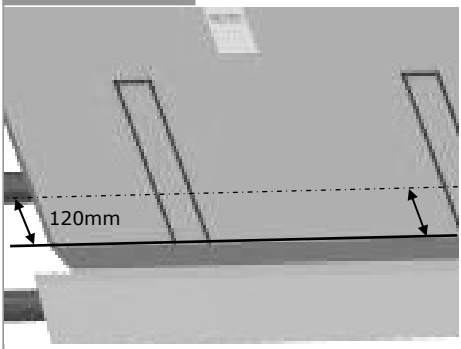
Kit Type	Tile Kit A	Slate Kit A
2m² Kit	1.36m	1.38m
4m² Kit	2.73m	2.75m
6m² Kit	3.97m	3.99m
2m² Ext Kit	+1.24m	+1.24m

B Tile Rook Kit = 2.4m
B Slate Roof Kit = 2.31m

NB: Sufficient overlap for slates/tiles must be allowed for when positioning the integrated roof kit.

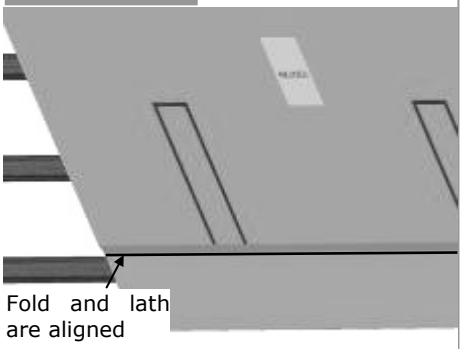


Step: 2.1 Tile



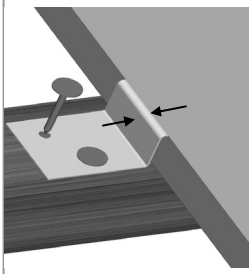
- Remove the BTM LHS sheet from the packaging. This will be the first sheet.
- The label on the sheets highlights its position on the installation.
- Unfold the lead flashing from behind the sheet as show in the diagram above. Take care not to detach.
- Position the sheet on the roof in the desired location, ensure that the fold in the sheet is offset form the lath by 120mm as highlighted above.

Step: 2.2 Slate



- Remove the BTM LHS sheet from the packaging, this will be the first sheet.
- The label on the sheets highlights its position on the installation.
- Position the sheet on the roof in the desired location ensuring that the fold as highlighted is aligned with the top side of the lath.

Step: 3.1 Tile

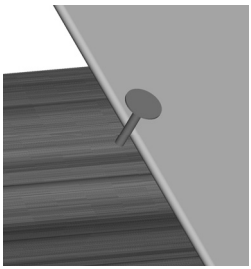


To secure the sides of the sheets in place, bend securing bracket as illustrated.

Use tacking nails to fix to the lath.

With pliers secure the securing bracket to the roof kit edges.

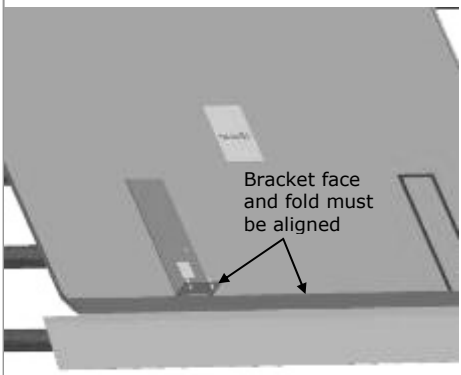
Step: 3.2 Slate



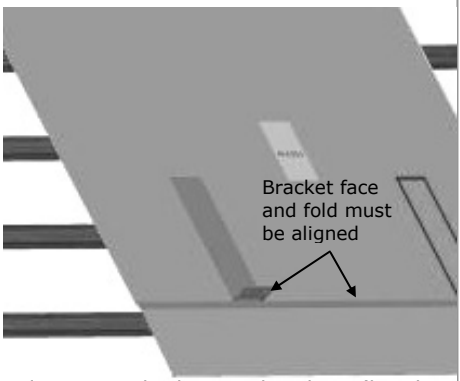
The head of the tacking nail is used to secure the side of the sheet in place.

One tacking nail can be used to secure each sheet at the outsides of the installation.

Step: 4.1 Tile



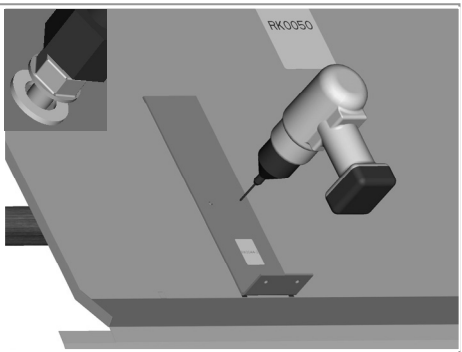
Step: 4.2 Slate



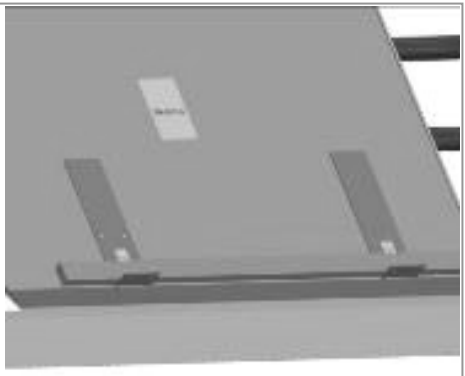
- Remove the backing from the acrylic tape and position the bottom brackets (bracket without hank bush fitted) making sure the bracket face is aligned with the fold on the sheet as highlighted above. The bracket must sit perpendicular to this fold.

Step: 5.0

- When the bracket is secured to the sheet, Fixing kit 1.2, 1.4 or 1.6 (st/st self drilling hex head screws) is used to secure the assembly to the laths.
- Assemble the nylon washer on to the hex head screw.
- Using the 10mm hex head drill bit secure the screw through the bracket into the lath beneath.
- The screw should be fixed to the lath furthest up the roof.



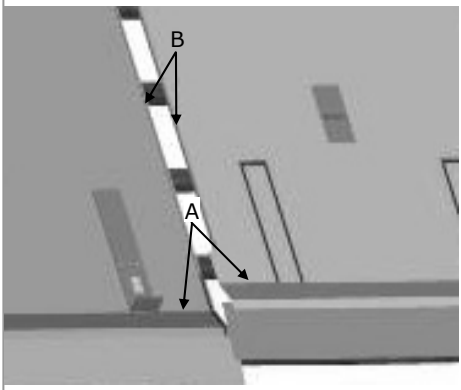
Step: 6.0



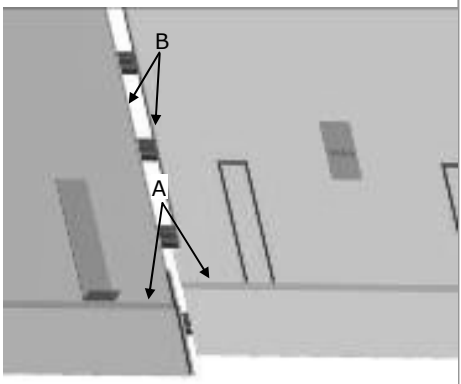
When installing the second bracket it is important that the two brackets are aligned to the fold as previously high-lighted, and the brackets are aligned to each other.

- Use a straight edge or a wooden lath to ensure both brackets are square.
- Again use the 10mm hex head drill bit to fix the bracket with Fixing kit 1.2, 1.4 or 1.6.
- For a 2m² kit, please skip to step 11.0.

Step: 7.1 Tile



Step: 7.2 Slate



When installing the second sheet in the installation, (bottom middle sheet or bottom right hand sheet) it is important that the sheets are aligned so that the folds, 'A' run true along the installation parallel with the lath and joints 'B' are butted against each other.

- Remove the backing from the tape on the edge of the bottom left sheet and ensure the next sheet is secured properly, the tape acts as an adhesive and a seal on the overlap joint.

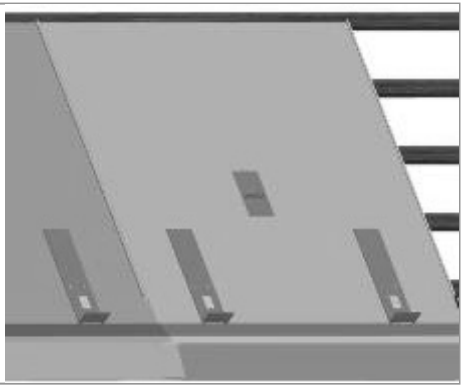
When installing from left to right, the right hand sheet always overlaps the left hand side sheet where applicable.

Step: 8.0

To complete the installation of the second sheet:

- Fit the brackets and ensure they are aligned using a straight edge where necessary.
- Pre-drill the brackets and secure using the self tapping screws provided.

If there are further extension kits to be installed they should be done so as outlined in steps 6.0 to 8.0 above.

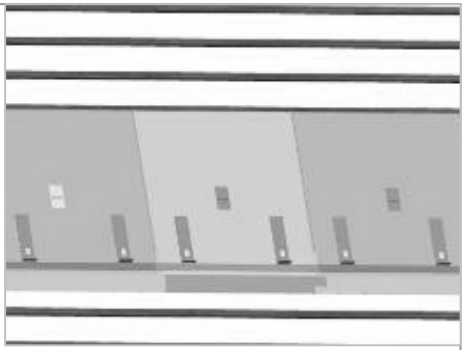


Step: 9.0

To complete the bottom of the installation the bottom right hand sheet must be installed.

This is done so following the instructions as stated in steps 6.0 to 8.0.

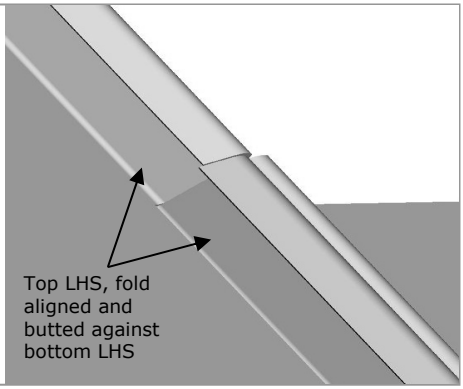
Care must be taken to ensure the above highlighted folds 'A' are parallel to each other and to the lath and that folds 'B' are butted against one another.



Where applicable, ensure that the lead is folded from under the sheets correctly and where the sheets join there is no gap between the lead and the aluminium sheet.

Step: 10.0

- When installing the top left hand sheet it is important that the folds on the top left sheet and bottom left sheet butt and are aligned as illustrated across.
- This fold must also run parallel with the bottom sheet fold from top to bottom of the installation.

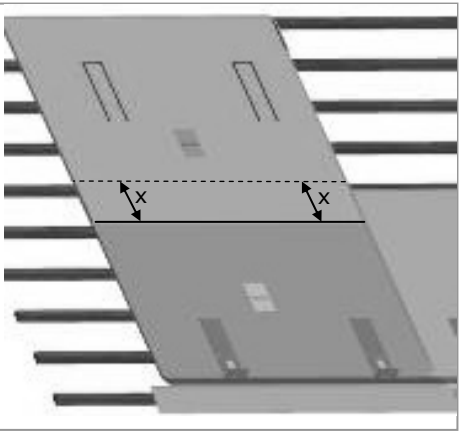


Step: 11.0

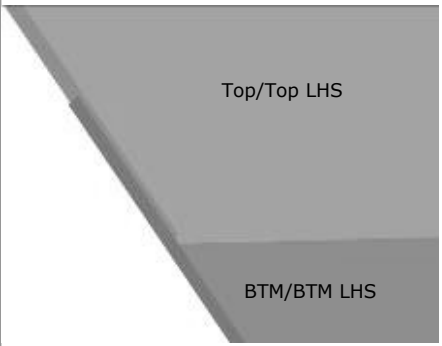
It is critical that the bottom and top sheets are square with each other. After the folds are butted against one another as described in 10.0, check and ensure the overlaps are as follows.

The overlap between top and bottom varies for tile and slate kits:

X = 200mm for Tile kit
X = 180mm for Slate kit



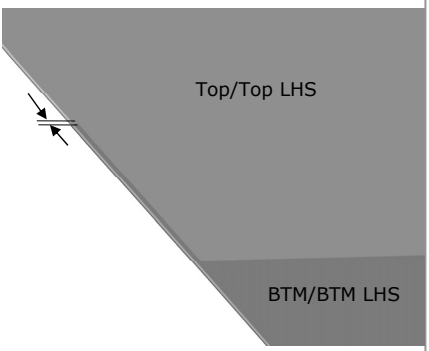
Step: 12.1 Tile



The top or top left hand sheet on the tiled kit will fit inside the bottom or bottom left hand sheet, as illustrated in the above figure. It is important to keep in mind:

- As stated in step: 11.0, the overlap must be consistent across the sheet.
- As stated in step: 10.0, the folds on top and bottom must butt join and align to one another, where applicable.

Step: 12.2 Slate



The edges of the top or top left sheet on the slate kit will not butt and finish aligned to one another, as illustrated above. It is important to keep in mind:

- As stated in step: 11.0, the overlap must be consistent across the sheet.
- As stated in step: 10.0, the folds on top and bottom must butt join and align to one another, where applicable.

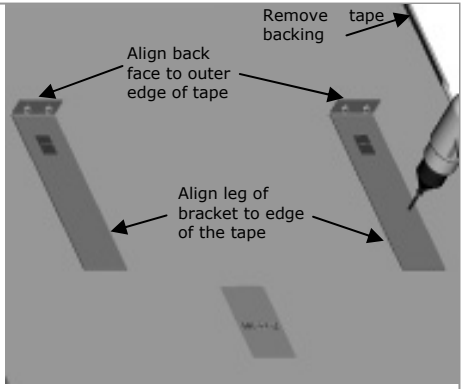
Step: 13.0

- Remove the backing from the tape and install the top brackets.

(These brackets can be indentified by the hank bushes assembled on to the inside face and also the label on the bracket highlights its position on the assembly).

- Align the back face of the bracket with the tape and the leg of the bracket along the side of the tape.
- Use fixing kit 1.2, 1.4 or 1.6 (self drilling hex head screws and washers) to secure the brackets to the laths beneath.
- Remove the tape backing on the top corner of the sheet.

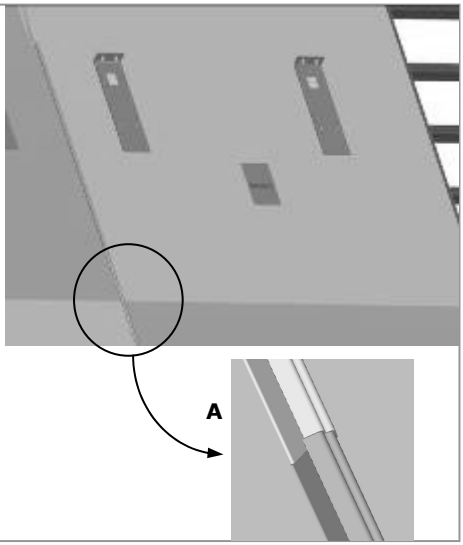
For a 2m² kit skip to step 17.0, for a 4m² kit skip to step 15.0.



Step: 14.0

The top right sheet can now be installed, it is important to keep note of:

- The overlap between top and bottom sheets, see step 11.0.
- The folds are butted against one another as shown in A across.
- Ensure where the top RHS overlaps the middle sheet, the tape is secured properly. Use silicone to achieve a watertight seal if necessary.
- Use fixing kit 1.2, 1.4 or 1.6 to secure the brackets to the lath.



Step: 15.0

The rubber seal(s) must now be fitted to the installation. They are used to seal the vertical joins between the sheets.

Bend the seal back on itself as illustrated in the image across.

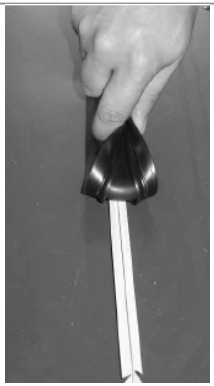
Start from the bottom of the installation and work up – keeping the rubber seal bent back on itself.

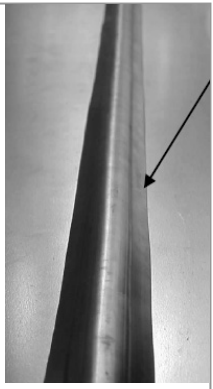
The seal will fit into position as it is worked up the installation.

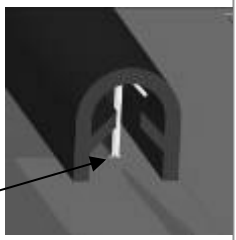
It is important that the seal engages with the folds in the sheets all along its length.

There should be an overhang of 20 to 30mm each side of the aluminium fold.

A bead of silicone should be placed as highlighted and fill the end of the rubber seal at all locations.







Step: 16.0

The collector(s) can now be installed. See chapter 2 for information on the collector connections, it is critical the collectors are orientated correctly.

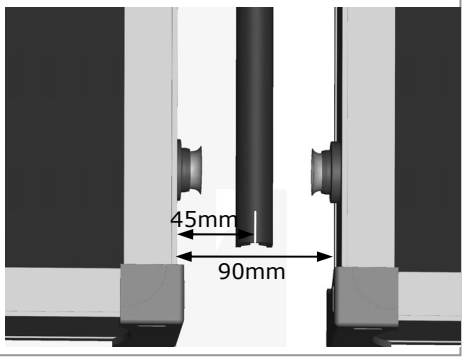
- Rest the collectors on the bottom brackets as highlighted in the image across.

The collectors can now only move left to right.

There are markings on the aluminium sheets that highlight the approximate position of the collector.

For exact location of the collectors:

- The gap between the frames of the collectors must be 90mm and 45mm from the centre of the rubber seal to the frame of the collector, as illustrated across.



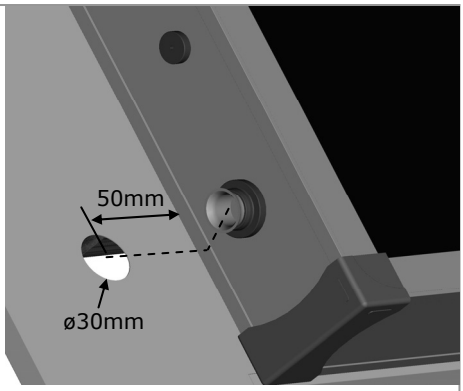
Step 17.0

To connect the inlet/outlet connections to the collectors:

- Drill a 30mm diameter hole in the aluminium sheets at the location of the flow and return pipes.

A conical drill bit or a standard drill may be used for this.

- The hole centre is to be positioned 50mm from the frame of the collector and in line with the collector connection, as illustrated across.
- It is important that any swarf or burred edges be removed.



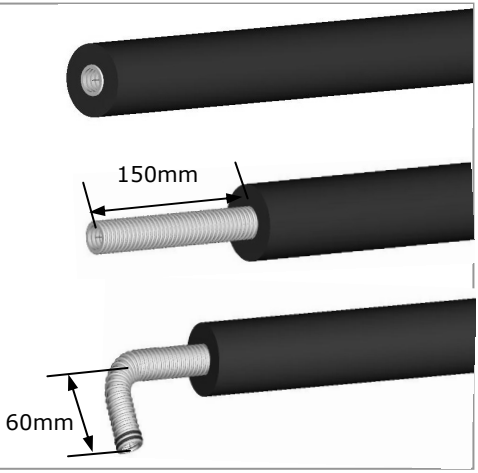
Step: 18.0

- Remove 150mm of insulation from the flexible pipe to allow sufficient clearance when feeding through the dektite.

- The insulation must be removed at the same end as the o-rings are placed.

- The pipe can then be bent as illustrated so it can be connected to the collector after being fed through the dektite.

A maximum bend of 60mm is sufficient.



Step: 19.0

- Feed the bent pipe from under the integrated roof kit, through the hole in the aluminium sheet, ensuring that the bent section with the o-rings is protruding to the outside.

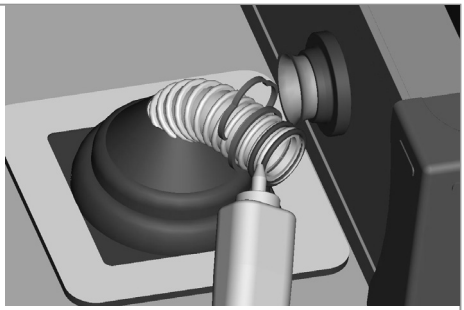
- Position the dektite around the pipe by firstly cutting the required diameter from the gasket, this should form a tight seal, water may be used as a lubricant to help feed through the corrugated pipe.

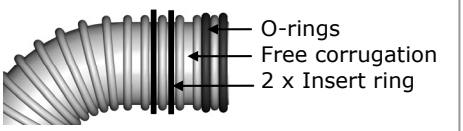
- Feed the pipe through the dektite and bring the dektite down until it sits on the integrated roof kit.

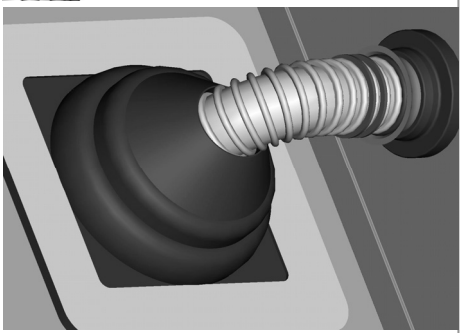
- Grease the o-rings using the tube of grease supplied.

- Fit the insert rings, ensuring that there is a single gap between the o-rings and the insert ring. See illustration across. The insert ring must be fitted after the pipe is fed through the dektite.

- Press firmly around the insert ring ensuring they are fitted securely to the corrugated pipe.







Step: 20.0

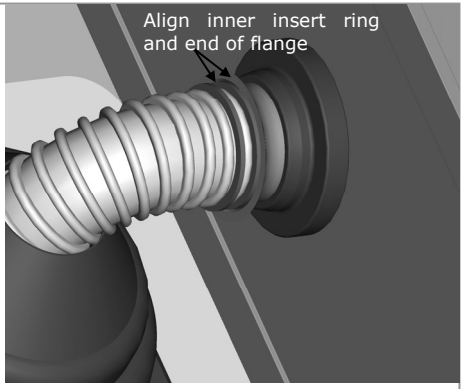
Insert the flexible pipe into the collector connection. It is important that:

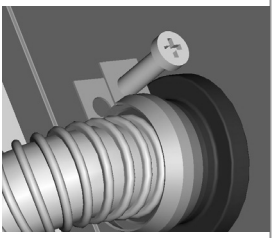
- The o-rings do not become deformed and retain their shape when being inserted into the collector.

- Ensure the corrugated pipe is inserted so that the first insert ring is flush with the collector connection and the other is outside the collector connection.

- The clamp can then be fitted on the connection to secure in place ensuring the outer insert ring is completely covered by the clamp.

- The screw is used to secure the clamp, it may be necessary to use an adjustable spanner or pliers to close the clamp.





Step: 21.0

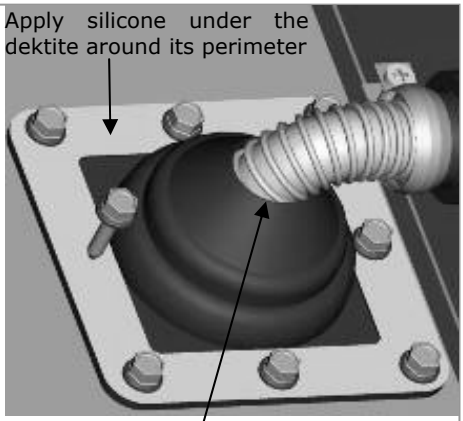
- It is important at this stage to lift the edges of the dektite and apply a generous bead of silicone around the perimeter to ensure a good tight seal is made with the integrated roof kit.

- Also apply a bead of silicone around the dektite where the pipe exits. The insulation cut off should be fixed around the exposed pipe work.

- Use the self drilling screws with sealing washers to secure the dektite to the integrated roof kit.

- Apply the screw caps.

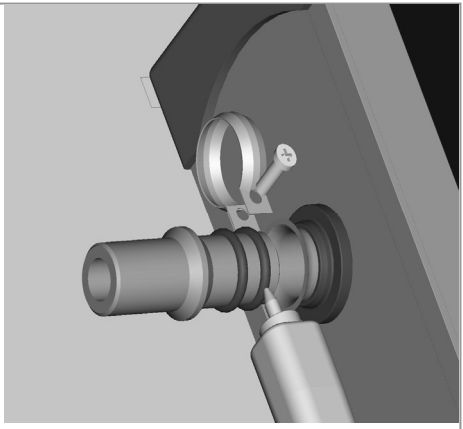
- Secure the insulation off cuts around any exposed pipe work.



Step: 22.0

To install the blanking connection:

- Grease the o-rings using the grease supplied.
- Insert the connection into the collector, the component must push in until it butts against the collector fitting.
- It is important that the o-rings do not become deformed when the fitting is being inserted into the collector.
- Finally use the clamp and screw to tighten up the fitting, it may be required to use adjustable spanner or pliers to close the clamp and align the screw with the nut.

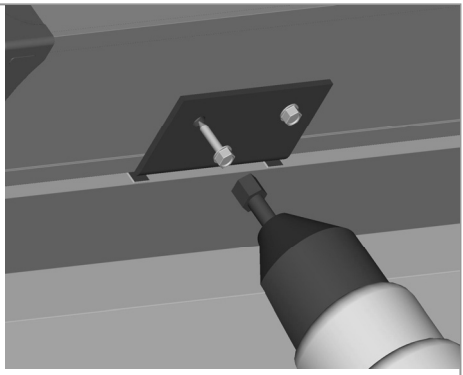


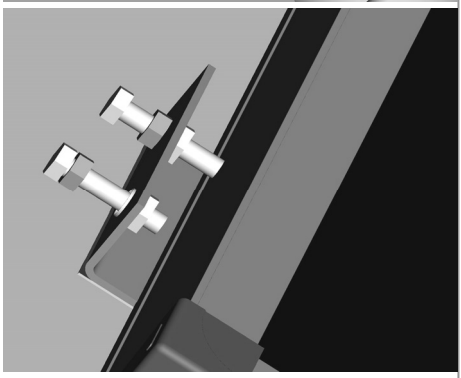
Step: 23.0

For a single collector installation all the connections can now be made following the above instructions.

It is now necessary to fix the first collector in position using:

- Fixing kit 2.2, 2.4 or 2.6 – Hex head self drilling screws. These screws are used to drill into the collector frame on the bottom brackets.
- The plastic caps can be fitted onto the head of the hex head self drilling screws.
- Fixing kit 3.2, 3.4 or 3.6 – M8 nut and bolt, is also used to secure the collector at the top of the installation. The nut is assembled onto the bolt and the bolt tightened against the collector with no greater than 2n-m of torque. The nut is then tightened against the bracket face.
- The first collector is the only collector to be secured at this stage.

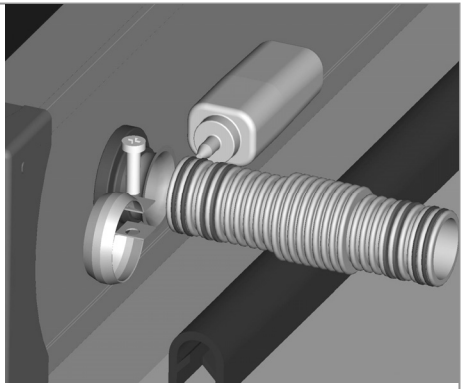


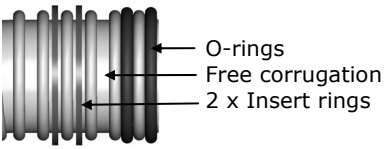


Step: 24.0

Both interconnection fittings can now be assembled. This is done in a similar way to the inlet/outlet connections.

- Fit the insert rings to the interconnection component. Ensure that they are fitted in the same fashion as in step 19.0, i.e. there is a free corrugation between the o-rings and the first insert ring.
- The insert rings must be firmly secured to the connection.
- Apply grease to the o-rings and insert into the collector so that the first 'insert ring is flush with the flange as in step 20.0.
- Fit the clamp to secure the connection in place, ensure that the outer insert ring fits inside the clamp when securing the screw.

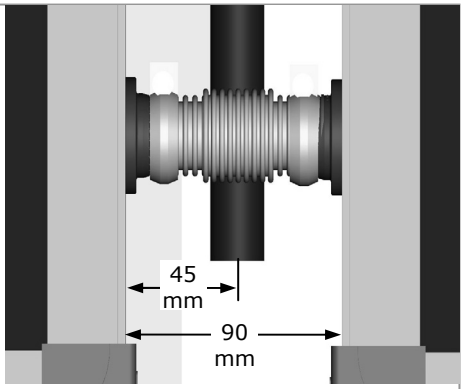




Step: 25.0

To install the next collector:

- Slide the collector (that is resting in place on the brackets) over into its position and into the connections.
- Ensure that the connections are made as described in step 24.0.
- The gap between the collectors must be 90mm as highlighted across.
- If flashing kits are to be installed please refer to the instruction manual at this stage.
- If they are not being used please refer to step 23.0 and fix the collector in place.



Step: 26.0

If additional collectors are being installed follow steps 16.0 to 25.0 inclusive, the same steps to make the connections should also be followed.

- Ensure the collectors are connected using the interconnections.

- The gap between the collector frames remains 90mm.

- The connections are fitted and secured in the correct way.

- The correct fixing kits are used to secure the collector in place.

- Inlet/out connections are installed as instructed using the dektite to feed the pipe work into the inside of the building.

- If flashing kits are to be installed with the integrated roof kit, refer to the instruction manual at this point. If flashing kits are not required then proceed with this manual.

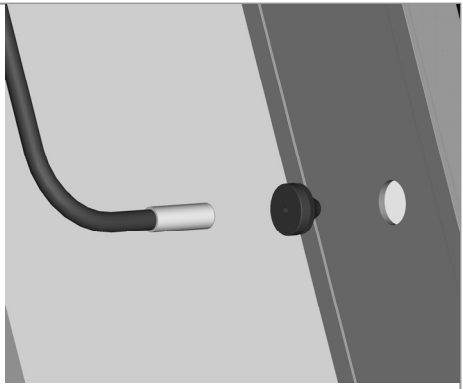
NB mid collector flashings must be installed before the collectors are secured using Fixing kits 2.2, 2.4, 2.6 or 3.2, 3.4 3.6.

Step: 27.0

The collector temperature sensor must be installed.

Install the sensor at the location of flow from the collector array, i.e. at the hot-test point in the installation.

Remove the grommet from its position and feed the sensor through the centre of the grommet.

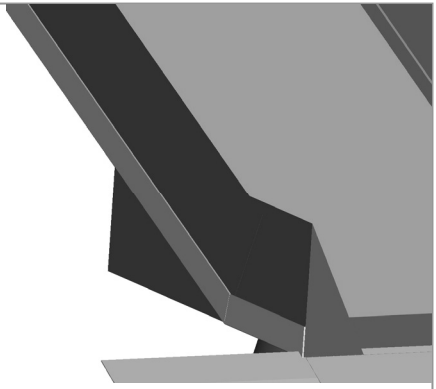


Slide the sensor all the way into the collector sensor pocket. The grommet can be repositioned into the collector frame.

The sensor wire can either be fed (to the over voltage protection box), over the edge of the kit and tiles/slates used to seal around or it can be brought through the dektite and silicone used to ensure it is sealed correctly.

It is important where the sensor enters the building, a watertight seal is formed and that the sensor wire is in no risk of being damaged or worn.

Step: 28.1 Tile



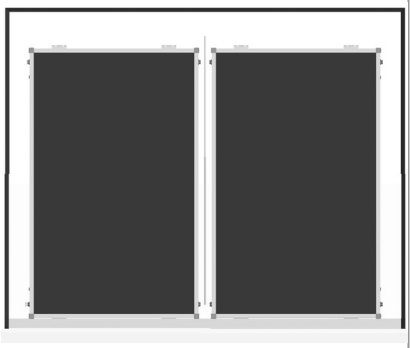
If using the flashing kits the foam wedge should be installed upon completion of these.

- To fit the foam wedge simply remove the backing from the adhesive and apply around the perimeter of the installation as illustrated.

- The straight edge of the foam wedge must butt against the fold in the sheets as illustrated.

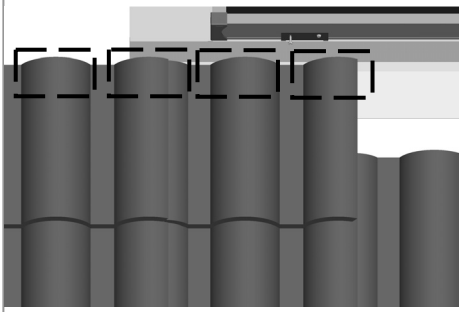
- There must be no gaps in the foam wedge when it is installed around the edges of the kit.

- The foam wedge applies only to the tile integrated roof kits.



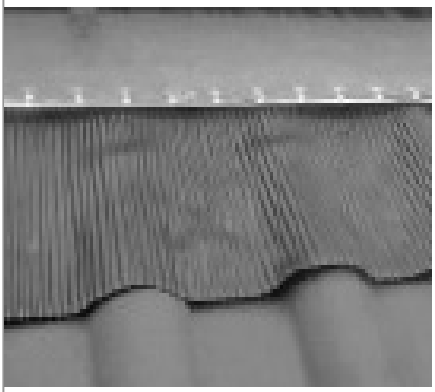
Foam wedge applied around the perimeter of the roof kit.

Step: 29.1 Tile



- When fitting the tiles under the lead flashing at the front of the kit it is important to chamfer the top edge of the tiles so they don't push up on the lead.

All the tiles under the lead should be cut in this fashion.

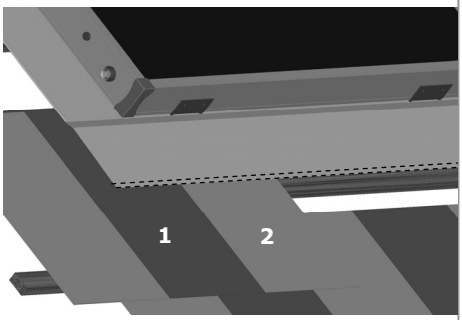


- Remove the backing from the mastic underneath the lead and work the lead around the corrugations of the tiles so that it is formed properly and secured to the tiles with the mastic.

It is advisable to use a wooden mallet to form the lead into position.

- Should there be no corrugations in the tiles, simply ensure the lead is laid flat and secured to the tiles using the mastic.

Step: 29.2 Slate

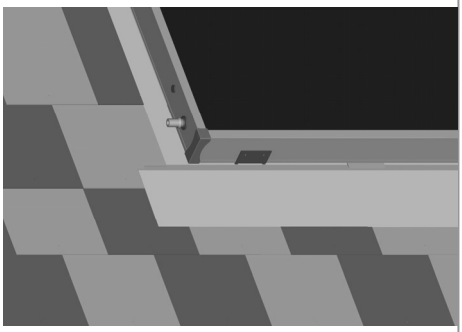


When laying slates around the integrated roof kit:

1. A full slate must be fitted under the kit at both edges, the slate must extend above the fold in the sheet.
2. The remaining slates must be cut (where required) and fitted under the bottom edge of the integrated roof kit.

Slates should be laid around the integrated roof kit so that maximum overlap possible is achieved.

It may be required to cut the slates at various instances around the integrated roof kit.



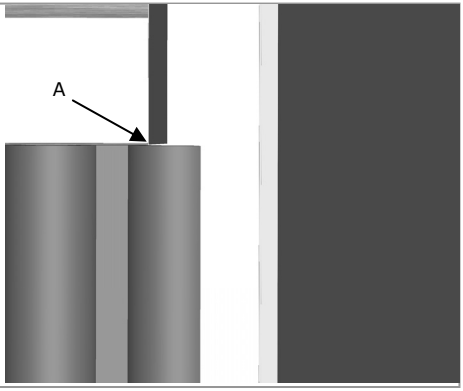
- Remove the backing from the tape under the front of the kit and secure to slates.

This step can be ignored if the end of the sheet is secured already through tension.

Step: 30.1 Tile

It is important when laying the tiles around the integrated roof kit to ensure:

- Sufficient overlap between the tiles and the edges of the kit exist.
- Place a small cut A, in the foam wedge at the top of each tile to allow the foam wedge to fill the gap between that tile and the next tile being laid.



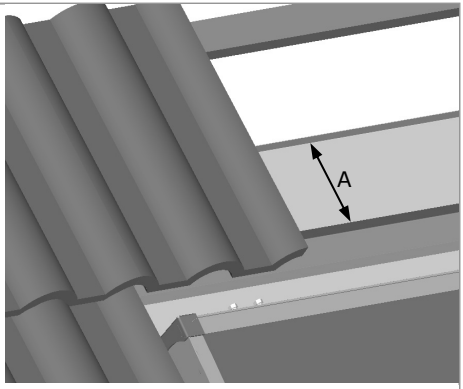
Step: 31.0 Tile

When laying the tiles around the top of the integrated roof kit installation it is required to use a tile support bracket.

This bracket ensures the tiles on top of the integrated roof kit are flush with the adjacent tiles on the roof.

To install the tile support bracket:

- Remove the backing from the adhesive tape.
- Align the brackets along the top of the integrated roof kit in a position that ensures the adjacent tiles being laid are in line with the tiles on top of the integrated roof kit.



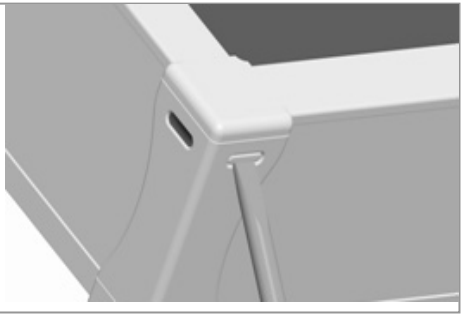
Distance A cannot be predetermined due to the various lath spacing's and tile types. The installer must choose a distance to offset which works best in their installation.

Step: 32.0

The bottom brackets on the collector must be punched through.

This can be done simply using a screw driver or a sharp edged tool.

Two spaces are to be punched as illustrated on all of the bottom brackets only.



Step: 33.0

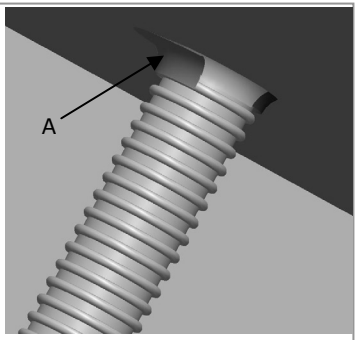
The felt or membrane under the integrated roof kit where the inlet/outlet pipe work enter the building must be repaired.

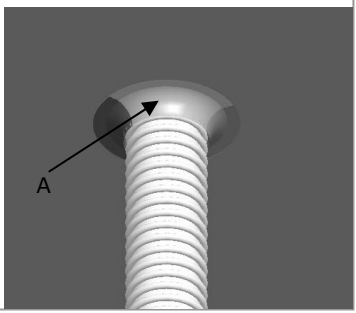
To do this a suitable tape must be used.

- Layer the tape in sections around the pipe as illustrated.

- The sections must be applied such that they overlap starting from the back of the pipe, A, (furthest up the roof).

- This must ensure the felt is completely sealed and watertight.





7 Operation & Maintenance

Connections should be double checked prior to commissioning of the system. Please refer to the On Site Guide for guidance on how to commission and operate the solar system.

Risk of scalding! Before carrying out any maintenance work on the system ensure that it is safe to do so. The solar system must be decommissioned before work can be carried out. Refer to the On Site Guide for a maintenance schedule of the complete system. Check for leaks at the collector connections and other connections in the system. Also ensure pipe insulation is intact and in good condition.

8 Decommissioning

Risk of scalding! Before carrying out any decommissioning work on the integrated roof kit, please ensure the solar system has been decommissioned.
If the product is being recycled, local waste disposal laws must be adhered to.

9 Technical Data

Weight	34.5kg
Dimensions	
- length	1870mm
- width	1150mm
- height	95mm
Heat transfer medium	Tyfocor LS
Max op. pres. [bar]	10
Tilt angle	
- min	20°
- max	90°

			Collector array [m²]									
			2	4	6	8	10	12	14	16	18	20
Δp	[mbar]	0.5 [l/min/m²]	150			160		170	185	195	200	210
		1.0 l/min/m²]	325	330		340		350	385	400	420	500
Cu Pipe	[mm]	0.5 [l/min/m²]	15 x 1			22 x 1					28 x 1.2	
		1.0 l/min/m²]	15 x 1	22 x 1			28 x 1.2			35 x 1.5		
Wind and snow load	[kN/m²]	suction	3									
		pressure	5									